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Acronyms and Abbreviations

21st CTP	21st Century Truck Partnership
42V	42-volt system
ACC	Automotive Composites Consortium
ACEM	aberration-corrected electron microscope
ADVISOR	Advanced Vehicle Simulator
AEMD	automotive electric motor drive
AFM	atomic force microscopy
AHHPS	Advanced Heavy Hybrid Propulsion Systems
AIPM	automotive integrated power module
ALM	automotive lightweighting materials
APBF	advanced petroleum-based fuels
APM	automotive propulsion materials
APRF	Advanced Powertrain Research Facility
APU	auxiliary power unit
ASTM	American Society for Testing and Materials
ATRIS	attenuated total reflectance infrared spectroscopy
CEO	chief executive officer
CFD	computational fluid dynamics
CHAIN	a computer modeling tool
CIDI	combustion-ignition direct-injection
COP	coefficient of performance
CSAFM	current-sensing atomic force microscopy
Cu	copper
DOE	U.S. Department of Energy
EERE	Office of Energy Efficiency and Renewable Energy
EGR	exhaust gas recirculation
EIA	Energy Information Administration
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act
EPS	essential power systems
EV	electric vehicle
FCVT	FreedomCAR and Vehicle Technologies Program
FTIR	Fourier Transform infrared spectroscopy

GATE	Graduate Automotive Technology Education
GHG	greenhouse gas
GPRA	Government Performance Results Act
GREET	Greenhouse Gas, Regulated Emissions, and Energy use in Transportation model
HCCI	homogeneous-charge combustion-ignition
HEV	hybrid electric vehicle
HFCIT	Hydrogen, Fuel Cells, and Infrastructure Technologies
HIL	hardware-in-the-loop
hp	horsepower
HSWR	high-strength weight reduction
HTML	High Temperature Materials Laboratory
HVPM	heavy vehicle propulsion materials
ICE	internal combustion engine
ISO	International Standards Organization
LDV	light-duty vehicle
Li	lithium
Li/S	lithium/sulfur
Li-ion	lithium ion
LTC	low-temperature combustion
MARKAL	a computer modeling tool
Mg	magnesium
MHEV	medium-HEV
MMBD	million barrels per day
MMC	metal-matrix composite
mpg	miles per gallon
MTBE	methyl tert-butyl ether
NEMS	National Energy Modeling System
NiMH	nickel metal hydride
NMR	nuclear magnetic resonance
NO_x	nitrogen oxides
NPBF	non-petroleum-based fuels
NVH	noise, vibration, and harshness
OFCVT	Office of FreedomCAR and Vehicle Technologies
OHFCIT	Office of Hydrogen, Fuel Cells, and Infrastructure Technologies

PHEV	power-assist HEV
PM	particulate matter
PNGV	Partnership for a New Generation of Vehicles
PP	polypropylene
PSAT	Powertrain Systems Analysis Toolkit
PSAT-PRO	PSAT Prototyping software
PTW	pump to wheel
R&D	research and development
ReFUEL	Renewable Fuels and Lubricants Facility
RFI	radio-frequency interference
Sb	antimony
SBIR	Small Business Innovative Research
SCR	selective catalytic reduction
Si	silicon
SI	spark-ignited
SiC	silicon carbide
SUV	sport-utility vehicle
USABC	U.S. Advanced Battery Consortium
USCAR	U.S. Council for Automotive Research
VCR	variable compression ratio
VISION	a computer modeling tool
WTP	well to pump
XPS	X-ray photoelectron spectroscopy
XRD	X-ray diffraction